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**Report No. 15474**

**IMPLEMENTATION COMPLETION REPORT**

**REPUBLIC OF BENIN**

**TRANSPORT INFRASTRUCTURE REHABILITATION  
AND MAINTENANCE PROJECT  
(CREDIT 1807-BEN)**

**March 28, 1996**

**Infrastructure Operations Division  
West Central Africa Department  
Africa Region**

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## CURRENCY EQUIVALENTS

Currency Unit = CFA franc (CFAF)

US\$1 = CFA franc 301 (1987)	US\$1 = CFA franc 283 (1991)
US\$1 = CFA franc 298 (1988)	US\$1 = CFA franc 265 (1992)
US\$1 = CFA franc 336 (1989)	US\$1 = CFA franc 280 (1993)
US\$1 = CFA franc 285 (1990)	

## WEIGHT AND MEASURES

Metric System

## FISCAL YEAR

January 1 - December 31

## ABBREVIATIONS AND ACRONYMS

ADF	- Banque Africaine de Développement (African Development Bank)
BCEAO	- Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of Western African Countries)
BOAD	- Banque Ouest Africaine de Développement (West-African Development Bank)
CAA	- Caisse Autonome d'Amortissement
CCCE	- Caisse Centrale de Coopération Economique
CFD	- Caisse Française de Développement
DFR	- Direction du Fonds Routier (Road Fund)
DMTP	- Direction du Matériel des Travaux Publics (Directorate of Public Works Equipment)
DROA	- Direction des Routes et Ouvrages d'Art (Roads Directorate in MET)
EDF	- Fonds Européen de Développement (European Development Fund)
FAC	- Fonds d'Aide et de Coopération (French Aid Agency)
IDA	- International Development Agency
IDB	- Banque Islamique de Développement (Islamic Development Bank)
IRR	- Internal Rate of Return
MET	- Ministère de l'Equipement et des Transports (Ministry of Equipment and Transport)
OBEMAP	- Office Béninois des Manutentions Portuaires (Beninese Cargo Handling Company)
OCBN	- Organisation Commune Bénin-Niger (Benin-Niger Organization for Transport Coordination) (manages the railway)
PAC	- Port Autonome de Cotonou (Cotonou Port Authority)
SMTMP	- Service du Matériel des Travaux Publics (Equipment Maintenance Division in DROA)

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**PREFACE**

This is the Implementation Completion Report (ICR) for the Transport Infrastructure Rehabilitation Project in Benin, for which Credit 1807-BEN in the amount of US\$20.4 million equivalent was approved on May 1987 and made effective in March 1988.

The Credit was closed on March 31, 1995 at the original closing date. Final disbursement took place on August 2, 1995 at which time a balance of SDR365,312.57 was canceled. In addition to the Government counterpart contribution and the financial participation of the Road Fund and of the Autonomous Port Authority, cofinancing of the project was provided by CFD (*Caisse Française de Développement*) and BOAD (*Banque Ouest Africaine de Développement*).

The ICR was prepared by Mrs. Suzanne Snell, Consultant, and Mr. Bernard Peccoud, AF4IN, task manager for the project. It was reviewed by Mr. James O. Wright, Chief, AF4IN and Franz Kaps, Operations Advisor, AF4DR. Preparation of this ICR began in April 1995 during the appraisal mission of a proposed Transport Sector Investment Program. Since the appraisal mission aide-memoire summarizes the findings as regards to the project, no specific ICR aide-memoire has been written. The ICR is based on material provided in the project file and in the file of the Transport Sector Investment Program. The Borrower contributed to the preparation of the ICR by preparing its own evaluation of the project's implementation (Appendix) and by commenting on the draft ICR.



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**EVALUATION SUMMARY**

**Introduction**

1. This report evaluates the ninth project in the transport sector in Benin. The eight preceding IDA credits totaled about US\$ 83.4 million.

**Project Objectives**

2. The project's overall objectives were to focus sector resources on maintenance of infrastructure, assist Government in setting up a sector strategy to better channel domestic and donor resources, and move the sector towards increased liberalization and deregulation, thereby improving sector efficiency. Specific objectives were to: (a) protect past investments in the port of Cotonou and in the road network by building maintenance capacity and mobilizing funding; (b) increase port productivity; (c) increase the Ministry of Transport and Public Works' capacity for road sector management; (d) increase private sector participation in road maintenance; and (e) improve cost recovery and maintenance funding. During the course of project implementation, some changes were made in the implementation arrangements, in the selection of roads to be rehabilitated and in the rehabilitation of technical standards. However, no formal re-appraisal was necessary.

3. The project objectives were realistic and achievable. The only covenants not complied with involved the level of resources for the Road Fund and the Port Authority's (PAC) financial ratios. Privatization of some aspects of cargo handling was the only major policy change included under the project which was not achieved. The only activity not implemented was twinning for the Road Authority (DROA). Only one of three risks cited in the SAR actually materialized: misallocation of road maintenance funds. The other two were successfully avoided: (a) over-investment in the transport sector; and (b) continued low staff productivity in road maintenance.

**Implementation Experience and Results**

4. **Achievement of Objectives:** The Project achieved most of its objectives:

- (a) **Sector Policy:** Achievement was substantial. By project completion, Government had developed a transport sector strategy. This program, prepared through a consultative process with all domestic actors, gained the support of all donors in a 1993 review.

- (b) Institutional objectives: Achievement was substantial. Road maintenance dramatically improved after the reorganization of the Ministry of Transport and Public Works (MTPT). Costly excess road capacity was avoided, a well-functioning maintenance programming and execution system was implemented and unit costs of road maintenance were cut. The Port Authority reduced its staff by half, privatized its non-strategic activities, and significantly improved its operational efficiency. However, the state owned cargo handling company (OBEMAP) remains a monopoly state entity operating inefficiently.
- (c) Financial Objectives: Achievement was partial. Government was unable to adequately fund road maintenance, though the resources of the Road Fund more than doubled during the project period. The PAC did not reach its financial targets, while outside financing has strengthened OBEMAP financial situation.
- (d) Physical Objectives: Achievement was substantial. Through BOAD and IDA funds, about 1500 km of roads were improved, compared to the 1000 km originally envisaged, and all the paved roads included in the project financed by the European Development Fund and the African Development Fund have been rehabilitated. Emergency repairs of main roads were included in the program after the 1991 flood. All port rehabilitation works were satisfactorily completed and uncommitted funds were used to rehabilitate the western dike, not included in the project.

**5. Economic Evaluation.** Traffic levels on the paved roads which were rehabilitated have been markedly higher than estimated. As a result, the IRRs for the two roads whose construction costs had been estimated at appraisal were greater than those estimated. The IRR for the Parakou-Malanville road was, however, lower than expected due to substantially higher construction costs with traffic levels within the range estimated: IRR of about 50 percent vs 106 percent estimated. The IRRs for non-paved (earth) road rehabilitation works were calculated for each road affected because of the change in technical standards. The IRR for the whole program is 200 percent, far higher than the 42 percent estimated for the original program. In the port, the physical benefits expected from the works have in all cases been demonstrated or exceeded, leading to an IRR higher than expected.

**6. Sustainability.** The physical achievements of the project in road rehabilitation and maintenance are expected to be sustainable. The PAC has privatized port maintenance works and is reserving the necessary funds to pay for it. The long-term sustainability of DROA's achievements in road maintenance depends on the completion of measures initiated under the project, including elimination of non-productive expenditures and improvement of resource mobilization through generalization and privatization of road toll collection. This matter is also addressed under the proposed Transport Sector Investment Program. There is full ownership of the sector strategy prepared under the project with the full participation of all actors, and that the project's institutional achievements are sustainable.

7. **Major Factors Affecting the Project.** Key factors which affected achievement in the financial area were: (a) from 1987 to 1991, the collapse of the Beninese economy resulting in the decrease of the Road Fund and PAC's resources; and the political and social turmoil which delayed actual start of road works; (b) from 1991 to 1994, the dramatic decrease in fuel tax collection due to widespread illegal importation of untaxed fuel from Nigeria, reducing the Road Fund resources, and (c) after 1994, the devaluation of the CFA franc which resulted in the increase of the cost of maintenance works and had a negative impact on the PAC's financial situation. While the project was not extended, it could have closed about a year ahead of schedule had it not been for Government's incapacity to correct serious shortcomings in project accounting, starting at the end of 1993 which have, however, since been corrected.

8. **Cost and Delays.** Despite a slow start, the project closed as expected. However, since the road works actually started three years later than expected, the cost for rehabilitation increased, mainly on the Parakou-Malanville paved road and on the unpaved road. MTPT successfully coped with this situation by reducing the rehabilitation technical standards, allowing it to increase the length of the road rehabilitated under the project. The devaluation in January 1994 of the CFA franc had little impact on project works or assistance because 95 percent of project funds had been committed by that time.

9. **Bank's and Borrower's Performance.** A major factor in project success was the high quality of dialogue, based on consensus building between the IDA task managers, all experienced road engineers, and Benin staff involved in project implementation. There was also unusual continuity in task management throughout the project's lifetime. Progress in implementing institutional reforms had been limited prior to the ministerial reorganization of 1992. Starting in early 1992, both the Transport Ministry and the PAC were able to move forward rapidly with works, programming, studies and privatization activities which had previously been stalled. The 1994 illness and death of the Minister of Public Works and Transport left a vacuum in leadership for about a year, which had a negative impact on the project management but little impact on the project objectives' outcome thanks to the continued dedication of key technical staff.

10. The assessment of outcome is rated satisfactory.

### **Future Operations and Lessons Learned**

11. A US\$45 million Transport Sector Investment Program, the first to be conceived in the context of a full sector strategy, was prepared in parallel with the last six supervision missions of the project. It comprises IDA's support to the Government's 1996-2000 Priority Investment Program in the transport sector, and reflects IDA's comparative advantage in the roads and port sub-sectors. Under this program, Government will finance routine maintenance. The program's overall design reflects the specific lessons of the Transport Infrastructure Rehabilitation Project, and the design of individual program components also reflects subsector-specific implementation lessons.

## 12. Key Lessons Learned

- (a) **Usefulness of Sector Strategy Work.** Participatory preparation of a full sector strategy document has led to the implementation of reform measures, the harmonization of donor activities, and the adoption of appropriate technical standards.
- (b) **Successful Privatization of Public Works.** The approach of introducing competition between existing force account teams and small local enterprises provides a good transitional arrangement which enables the potential gains from privatization to be clearly demonstrated without abolishing existing agencies. In fact, the coexistence of both force account and private contractor teams doing simultaneously the same kind of road maintenance works can give both an incentive to optimize performance.
- (c) **Designing Robust Project Objectives.** The limited and straightforward nature of the project's objectives proved sufficiently robust to withstand extended political and economic turbulence, the birth of a democratically elected government, privatization, natural disaster, substantial drop in domestic funds for road maintenance, and devaluation. The project did not need to be reappraised or restructured; technical standards for works were modified and road sections were added or dropped, but the project objectives remained the same.
- (d) **Technical Assistance.** The full-time permanent technical assistance arrangements in the project were very expensive and did not work well. A better arrangement has been worked out for the follow-up program, involving short-term technical assistance to achieve specific objectives linked to performance indicators. A combination of both local and international consultants would offer the advantages of both costs reduction and local accessibility.

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**PART I: PROJECT IMPLEMENTATION ASSESSMENT**

**I. INTRODUCTION**

1. **Background.** By 1983, the fourth year of the Cotonou Port Project and the second year for the Fourth Highway Project, Government's and IDA's attention turned to routine and periodic maintenance of the port and of the 7500 km paved, gravel, and earth road network. A 1982 Bank Economic Mission had reported on the lack of a single coordinating authority for the transport sector, the absence of a formal transport sector plan, the lack of centralized accounts and incomplete accounting records, and a dearth of qualified, motivated staff. There was a realization that the shortfall in benefits from port investment was partly due to bottlenecks created by rigid state control of transit traffic.
2. The underlying public policy issues hindering more efficient operation of the transport sector were the slow pace of deregulation, continued public monopolies in freight handling, and restricted access of the private sector to the port and to contracts for road maintenance, which were mostly carried out under force account. The 1983 initiating project brief states that the project is to be used as a vehicle to initiate sector deregulation, and therefore project implementation should be subject to Government taking measures to reduce the role of the rail company, and to improve transport investment and maintenance management.
3. Spanning the period of transformation through its completion in 1995, the history of the project provides a stage for observing how the liberalization and privatization processes in Benin indeed succeeded in reviving the economy. It also provides examples of how deeply rooted some elements of the state system remain, such as the railroad and the cargo handling agency, and how difficult it is for lucrative road user charges to be channeled into road maintenance during periods of government financial difficulty, even with a good road fund mechanism in place.

**II. PROJECT OBJECTIVES**

4. The project's overall objectives were to focus the use of sector resources on maintenance infrastructure, to assist Government in setting up a coherent sector strategy to better channel domestic and donor resources, and move the sector towards increased liberalization and deregulation, thereby improving sector efficiency and productivity. The

specific objectives were to: (a) protect past investments in the port of Cotonou through urgent dredging and repairs, and in the road network by building maintenance capacity and mobilizing funding; (b) increase port productivity by modernizing equipment maintenance and improving management within the port authority (PAC) and the cargo handling agency (OBEMAP); (c) increase the Infrastructure/Public Works/Transport Ministry's (MET/MTPT) capacity for road sector management, study and project preparation, and staff management and training; (d) increase private sector participation in road maintenance by reducing force account works; and (e) improve cost recovery and maintenance funding.

5. The project included three major components. The **port rehabilitation component** included repair and rehabilitation of main infrastructure, and improvements to the PAC and OBEMAP maintenance facilities. The **highway component** included resurfacing of about 440 km of paved roads, rehabilitation of regraveling of about 1010 km of heavily traveled unpaved roads, new road maintenance equipment, spare parts, tools and repair, and extension of road maintenance office (DROA) buildings. The **institution building component** included technical assistance and training to the Ministry's department in charge of sector policy formulation, to DROA and the Road Fund for reorganization of road maintenance financing and operation, and to the PAC and OBEMAP for management, maintenance and operations, and for a maintenance dredging study. The Credit Agreement was amended in 1991 to finance emergency road repairs in Cotonou following the floods of July 1991.

6. **Evaluation of Objectives and Risks.** Project objectives were realistic and achievable, especially given the requirement for a seven-year project implementation period (regional disbursement profile). In fact, during early project preparation, the project period had been set at four years, as a function of time required to carry out works. The only covenants not complied with involved the level of resources for the Road Fund and the PAC's financial ratios. Privatization of at least some aspects of cargo handling is the only major policy change included in the project which continues to be resisted. The only activity not implemented was twinning for DROA.

7. The project never required reappraisal or formal restructuring. Project implementation arrangements were modified only slightly for road maintenance. There were ministerial reorganizations and renamings, and the Road Maintenance Office, equipment office, and other units within the Ministry were also reorganized internally or given new names, but the project implementing agencies remained essentially the same. Action plans included in the SAR for the PAC, OBEMAP, the Ministry's studies office, and the Road Maintenance Office were all revised in the course of project implementation. The selection of road sections rehabilitated was also modified as a function of changing network conditions and the need for emergency works following severe flooding in 1991, but the criteria selection for funding remained the same, the nature of works and assistance financed under the project corresponded to the project description and objectives.

8. Only one of the three project risks listed in the SAR actually materialized, the allocation of part of road maintenance funds to non-maintenance expenditures. The other

two main risks mentioned were successfully avoided: over-investment in the transport sector (through the preparation of investment plans and the sector strategy), and continued low staff productivity in road maintenance (through a staff assessment, reduction in force, and conversion of salaried workers to contract employees).

#### **A. Achievement of Objectives**

9. Earlier projects in the transport sector had been successful in showing good economic rates of return, often higher than estimated at appraisal, good works execution (feeder roads) and good institutional results (feeder roads, port project), but they had achieved poor results in terms of infrastructure maintenance. This project succeeded where earlier projects had failed, although with major delays due to factors beyond Government's control. In fact, most of the project's objectives were achieved, but later than expected; still, the project closed on time because of a conservatively long project period based on the regional profile (seven years).

#### **Sector Policy Objectives**

10. **Overall Sector Management.** Achievement in this area was substantial. Where no overall policy or investment plan existed for the sector, by project completion Government had developed a transport sector strategy in earnest. Investment plans discussed during project preparation became the basis for preparing a comprehensive five-year rolling priority sector investment program. This program, prepared through a consultative process with all domestic actors, has gained the support of all donors, who reviewed it in 1993 and are scheduled to review the revised program in 1996. It is a major achievement of the project that the process of preparing the five-year rolling sector investment program succeeded finally in marginalizing investment in the railroad, and in confirming direct and open competition between rail and road transport.

11. **Road and Port Subsector.** Achievement was substantial. Road maintenance efficiency has dramatically improved. Government's road maintenance managers made the right decisions on road paving priorities. By avoiding costly excess road capacity, they implemented a well-functioning works programming and supervision operation and found ways to cut unit costs of road maintenance. Roads in the priority network are now kept open year-round despite the shortfall in funds. However, Government was unable to fully fund road maintenance, and this issue has carried over into the follow-up Transport Sector Project. The restructuring of the port authority has succeeded beyond appraisal estimates. The PAC reduced its staff by half, privatized its non-strategic activities, and significantly improved its operational efficiency. However, OBEMAP remains a state entity with a monopoly on freight handling and operates inefficiently, though technical assistance provided by CFD under the project somewhat improved technical performance.

## **Financial Objectives**

12. **Road Subsector.** Achievement was partial. Setting up of an efficient and functional accounting system for the Road Fund was one of the few achievements of the 1987-90 period. However, collections of fuel tax and other road user charges during the 1985-92 period fell to a third of the levels required to fund road maintenance as agreed upon at negotiations (CFA franc 3 billion). The increase in fuel tax intended to raise resources to that level was implemented as planned in 1988 but brought in little extra funds, because by that time demand had fallen off sharply. Once economic activity started to pick up again in 1991, domestic fuel sales failed to rebound because of the availability on the black market of fuel at a fraction of the cost from Nigeria. In addition, only 60 percent of the resources actually were used for road maintenance. However, since programming and execution continued to improve, the Ministry was able to maintain the rehabilitated network. In 1995, the user charge collected at the port and available to the Road Fund was substantially increased, allowing the Road Fund to cover 70 percent of the routine maintenance needs compared to around 30 percent in 1991.

13. **Port Subsector.** Achievement was partial. By mid-1991, the PAC's new accounting system was being implemented, studies for improvement of its operations had been carried out and recommendations were being acted upon. Following the de-facto financial restructuring of the port authority in 1991, its financial situation improved considerably between 1991 and 1993. It reduced its staff by about 50 percent and privatized virtually all production activities. From 1987 to 1995, it enjoyed a 64 percent increase in traffic volume and was successful in recovering bad debts of CFA franc 1.2 billion in 1994. The PAC showed a surplus in 1994 for the first time in years. However, the devaluation of January 1994 increased the PAC's debt, only partially offset by its net impact on revenue. As a result, the PAC was not able to achieve the targeted ratio of working capital and indebtedness. However, the PAC was still able, over the project period, to finance its routine maintenance and to set up a three-year revolving fund to finance periodic dredging, a major recurrent cost, rather than using external financing. The comprehensive financial restructuring funded by CFD outside the project has comfortably strengthened OBEMAP's financial situation.

## **Institutional Development Objectives**

14. **Overall Sector Management.** Achievement was substantial. By 1985 project appraisal, responsibilities previously split between public works and transport ministries had been merged into a single Ministry. This Ministry was reshaped in 1991, permitting good technical and management staff to be brought in, most of whom remain. Under the new Minister's leadership, things began to happen, starting with the internal reorganizations of the port authority and of road maintenance and sector planning units within the Ministry. The high level of commitment from 1992 was also reflected in the organization of a seminar with the participation of users, private transport operators and donors to review the results of the strategy study and discuss transport strategy issues. Government presented

the strategy which grew out of this consultative effort to the donors' round table meeting of October 1993 and received support from donors.

15. **Road Subsector.** Achievement was substantial. During project preparation, a decree of August 1985 assigned DROA the responsibility for road maintenance and for creating six provincial directorates. However, lack of accountability resulted in continued poor performance in road maintenance. The 1992 ministerial reorganization eliminated the authority of provincial offices for road maintenance. Provincial units began reporting directly to DROA and 50 percent of the rehabilitation works were contracted out. From that time, major improvements were made in road maintenance programming and execution. During the project period, DROA implemented its new road maintenance system, privatized execution of all cantonnage works and completed a plan for staff restructuring. DMTP installed a commercial accounting system in 1992 and actually began functioning as an equipment rental agency in 1993. Poor quality of technical assistance, due to frequent changes in mission management, lack of involvement in daily operations and of access to information prevailed until end-1991. Thereafter, the situation improved after an attempt to convert the technical assistance contract with a firm to individual direct contracts with the most effective team members and after the revision of terms of reference. The twinning activities were not implemented because of the lack of experience in privatization of road maintenance by the target pool and lack of funds under the disbursement category.

16. **Port Subsector.** While traffic languished, the PAC had breathing space to revamp its accounting system, start up a computerized management system (ESCALE), privatize activities not directly linked to port operations, and complete project-supported rehabilitation works. However, no sooner had its traffic levels recovered from the low levels of the 1980s, the latent operational constraints of non-privatized activities became obvious. The high breakdown rate of OBEMAP equipment, slow customs processing, a complete lack of control over private port operators and the rapidly growing vehicle import led to port congestion.

17. The PAC benefited from the implementation of the port management computerized system (ESCALE) in both resource collection and financial management. The influx of private actors into the port following deregulation in 1990 and the rapid increase in port traffic, especially in used vehicle imports, revealed weaknesses in the PAC's statutes which had never mattered during the project preparation and the project's early years. Lacking authority over licensing and sanction of private operators, the PAC was unable to prevent the rise of chaos in port activities, despite the implementation of port management software in 1992. Improving port operations will require improved performance of the Customs administration and OBEMAP, and to establishing the PAC's authority firmly over port operations. This is a matter which is being addressed in the context of the proposed Transport Sector Investment Program.

## **Physical Objectives**

18. **Road Subsector.** The achievement was substantial. About 1500 km of roads were improved under BOAD and IDA's financing, compared to the 1000 km originally envisaged, and all the paved roads included in the project under EDF's and FAD's financing have been rehabilitated. As a result of the two-year delay in project start up, the condition of almost all the unpaved network had become very poor by mid-1990. This, together with the unexpected allocation of around US\$3.0 million for emergency repair of the main section of the priority network after the serious 1991 flood, prompted a shift to lower technical standards in order to cover a greater portion of the network. Works focused on spot improvements and spot regravelling, rather than on systematic rehabilitation and regravelling as provided for in the SAR. The rehabilitated unpaved roads have continued to be maintained, despite the lower standards and the shortage of maintenance funds, because of DROA's improved ability to stay on top of network conditions and to carry out routine maintenance works.

19. **Port Subsector.** Startup of port works was delayed less than for road works, and all port rehabilitation works were satisfactorily completed by August 1991. Uncommitted funds were reallocated in 1993 to rehabilitate the western dike, not originally included in the project. These works were cofinanced by IDA, IDB, and CCCE/CFD.

## **B. Economic Evaluation**

20. **Road Component.** Traffic levels on the two shorter paved roads which were rehabilitated has been markedly higher than that estimated, while construction costs for both roads were as estimated. Thus the IRR on these two road improvements is greater than the one estimated which was 68 percent and 30 percent, respectively. The IRR for the Parakou-Malanville road is, however, lower than expected due to substantially higher construction costs with traffic levels within the range estimated: IRR of about 50 percent vs 106 percent estimated. IRR for non-paved (earth) road rehabilitation works were calculated for each road affected because of the change in technical standards. The IRR for the whole program is 200 percent, far higher than the 42 percent estimated for the original program. This is due to the fact that spot improvement works are much less costly than full rehabilitation but yield very high benefits, since the situation without project results in traffic interruption. IRR for individual roads treated range from 502 percent for roads with very low rehabilitation costs, to 6 percent, with a single road falling below the 12 percent mark.

21. **Port Component.** The physical benefits expected from ports works have in all cases been exceeded. Although the rate of return has not been recalculated, a comparison of the cost and benefit flows expected indicates that the IRR would be in all cases at least as high as estimated. For the repair of the old commercial quays, the IRR of 23 percent was based on a without-project situation requiring reconstruction in 2000, whereas with the project this could be postponed until 2015. In the cases of the protection of the south bank of the port basin (IRR, 33 percent) and eastern breakwater (IRR, 21 percent), there has been no erosion of the basin and the breakwater deterioration has been stopped. In the case of

dredging, works carried out have permitted passage of clinker and oil tanker traffic at a level twice as high as that assumed in estimating the 26 percent IRR, and the predicted maintenance dredging period of four years has been confirmed.

### **III. IMPLEMENTATION EXPERIENCE AND RESULTS**

#### **A. Implementation Record**

22. Paved road works began in late 1988, but all three were not completed until mid- or late 1992. Unpaved road rehabilitation works financed by BOAD suffered from slow implementation, from 1988 until 1990. Then the contractor went bankrupt. It was only in mid-1995, after long negotiations with BOAD and unsuccessful rebidding in 1993 that the works restarted, based on spot improvements rather than systematic rehabilitation or regravelling. Ongoing works will be completed by mid-1996.

23. Despite delays, efficient disbursement left IDA's credit with only US\$0.8 million undisbursed out of US\$19.0 million in May 1993, and there was a proposal to advance the closing date from March 1995 to March 1994. In the end, this did not happen due to a decline in project management performance following the departure in late 1993 of the local project coordinator, who was never replaced. Disbursements slowed in January 1994, and operating costs began to increase following the devaluation of the CFA franc. The June 1994 audit of project accounts indicated that despite the capability of the local accounting staff, project accounts had not been kept up when staff demands for an incentive were not met. The situation has since been corrected and the final audit was acceptable. Government's request to extend the original March 1995 closing date was denied, with about SDR 365,312.57 remaining in the credit, and the project closed on the original schedule with the remaining balance being cancelled.

#### **B. Major Factors Affecting the Project**

##### **Factors Generally Beyond Government Control**

24. The project's preparation and early implementation coincided with a period of great upheaval in Benin's economic and political life. The economic stagnation of 1983-87 and the political turmoil of 1987-90 resulted in long strikes of civil servant in support of salary payments and political reform; collapse of the banking system wiping out around CFA franc 6 billion in cash and receivables for the PAC; and slowdown of economic activity reducing collection of the fuel tax, the main resource used to finance road maintenance. Following the 1990 National Conference, which paved the way for the 1991 elections, the banks began to reopen but the political situation remained somewhat fluid. The political and economic turmoil which coincided with the project's first three years, delayed start up of road rehabilitation and maintenance because salaries were not paid, and staff were demotivated, and the reorganization of road maintenance was delayed.

25. Throughout the project period and especially from 1991, the Road Fund lost billions of CFA franc in uncollected tax on fuel use due to widespread illegal importation of untaxed fuel from Nigeria. On the order of 80 percent of fuel consumed was not purchased in Benin, and the price differential of 300 percent to 500 percent could not be addressed through domestic policy measures.

26. The devaluation in January 1994 of the CFA franc had little impact on the project or assistance because 95 percent of project funds had been committed by that time. The few contracts still underway were quickly amended to take account of the change. However, the devaluation had a major immediate negative impact on road maintenance costs and the PAC's financial situation, thereby creating a new challenge for full achievement of project objectives. The roughly 50 percent increase in road maintenance costs was not offset by an increase in funds before 1995. The PAC's revenues denominated in foreign exchange are small. The devaluation increased management and maintenance costs, leading to a worsening of its financial situation, already weakened by a drop in import traffic levels. The PAC's financial situation is still fragile.

#### **Factors Generally Subject to Government Control**

27. Credit effectiveness, originally scheduled for October 1987, was postponed and eventually declared on March 1988 because of slow implementation of conditions.

28. Prior to the 1992 changes of government, frequent staff turnover and reluctance to take decisions constrained the road component. Likewise, the Government's reluctance to introduce significant increases in the road tax limited increases in the Road Fund resources prior to 1995. In the port component, Government's reluctance to move towards even partial privatization of cargo handling and to give the PAC authority to coordinate all port actors continues to constrain increases in port productivity.

29. While the project was not extended, it could have closed about a year earlier had the Government corrected some serious shortcomings in the project's accounting and coordination, as requested by IDA. Until 1992 and 1993, audit reports were not provided on time. From mid-1994, the illness and death of the Minister of Public Works and Transport and temporary assignment of project authority to the Energy Minister left a vacuum which persisted until the nomination of a new Minister in July 1995.

#### **Factors Generally Subject to Implementing Agencies' Control**

30. The technical assistance team to the Road Fund and the road maintenance office (DROA) was provided with offices far from ministerial headquarters, a restriction which limited the experts' access to information. That problem was resolved in late 1992, their number being reduced and their offices moving closer to the Ministry's.

### **C. Project's Sustainability**

31. The physical achievements of the project in road rehabilitation and maintenance are expected to be sustainable. The PAC has privatized port maintenance works and is reserving the necessary funds to pay for it. Long-term sustainability of DROA's achievements in road maintenance depends on the completion of measures initiated under the project, including progressive elimination of non-productive expenditures and improved resource mobilization through generalization and privatization of road toll collections. Improvements in resource collection initiated in 1995 are expected to double resources available in the short term allowing DROA to carry out efficient maintenance of all the priority network. The implementation of these measures would be supported under the proposed Transport Sector Investment Program.

32. There is full ownership of the sector strategy prepared under the project with the full participation of all actors, and the project's institutional achievements are sustainable, provided that MTPT and PAC retain experienced staff in key posts. Both the PAC and road sector managers continue to be fully involved in increasing institutional performance from within. The PAC's management spontaneously designed a successful internal reorganization, introduced management improvements, and has taken the leadership in setting up new mechanisms for port coordination. Traffic growth of about 3 percent per year for the 1995-2000 period should result in a good operating ratio of about 80 percent, and debt reduction will bring the debt-equity ratio down to about 50 percent by 2000. Thus, working ratio and debt-equity ratio targets which the PAC was unable to meet through the project period should be reached or exceeded in the near future.

### **D. Assessment of Bank's Performance**

33. A major factor in project success was the quality of dialogue, based on consensus building between the IDA task manager and Benin staff involved in project implementation. There was also unusual continuity in task management throughout the project's lifetime; only three task managers were involved from the initial project brief to closing, a period of over ten years, and the second and third managers each had months or years of overlap. All three tasks managers were experienced road engineers, and they were accompanied by financial analysts who supervised port and cargo handling agency finances in four of the last six supervision missions.

### **E. Borrower Performance**

34. Progress was limited prior to the ministerial reorganization of 1992. Thereafter, both the Transport Ministry and the PAC were able to move forward rapidly with works, programming, studies and privatization activities which had been stalled, and they were able to present proposals for reallocating uncommitted project funds which IDA accepted. The 1994 illness and death of the Minister of Public Works and Transport left a vacuum in leadership for about a year, but the continued dedication of key technical staff to the objectives of this project and of the sector strategy contributed substantially to a renewal of

commitment to actions required to implement the sector strategy over the 1995-2001 period in a policy letter signed by the new Minister and approved by the Cabinet in February 1996.

35. Government's counterpart contribution fell short of the US\$4.8 million expected, totaling US\$2.3 million, composed of 10 percent of the cost of road and port works financed by IDA, FAD and IDB. This funding shortage was overcome by the decision of FED, CCCE and BOAD to cover 100 percent of costs for the works they financed.

#### **F. Assessment of Project's Outcome**

36. On the basis of the assessment summary shown in Table 1, the project's outcome is rated satisfactory. The assessment with regard to the initial project objectives is as follows:

- (a) Past investments in the port and road network were effectively protected through port dredging and repairs and by building maintenance capacity.
- (b) Port productivity was improved relative to its earlier performance in low traffic situations; potentially greater increases in productivity during the project were constrained by Government reluctance to privatize cargo handling and confer to the PAC the authority to require Customs' participation in port management systems.
- (c) The Ministry's capacity for road sector management, study and project preparation and staff management and training was greatly improved. A single sector-wide rolling investment program for road and port investments was accepted at the project outset.
- (d) Private sector participation in road maintenance increased from insignificant levels to nearly half of annual works, with parallel reductions in force account works and staffing levels. Government has now set specific limits to force account road maintenance works (CFA franc 1 billion), with the rest going to private contractors.

#### **IV. FUTURE OPERATIONS**

37. A proposed US\$ 45.0 million Transport Sector Investment Program, scheduled for late FY96 or early FY97 and the first to be conceived in the context of a full sector strategy, was prepared in parallel with the last six supervision missions of the project. It comprises IDA's support to the Government's 1996-2000 Priority Investment Program in the transport sector, and reflects IDA's involvement in the roads and port subsectors. Under this program Government will finance routine maintenance. Donors will finance road sector management improvements, a traffic safety program, support to local contractors, and civil works to rationalize the use of space within the port and support for operational and financial improvements. The program includes also support to innovative institutional arrangements in rural road maintenance and urban traffic management. The program's overall design

reflects the specific lessons of the Transport Infrastructure Rehabilitation Project, and the design of individual project components also reflects subsector-specific implementation lessons. Two design changes applying throughout the project involve the switch from permanent to short-term technical assistance, and introduction of mechanisms for user participation in decision-making.

## V. KEY LESSONS LEARNED

38. The key lessons learned are as follows:

- (a) **Usefulness of Sector Strategy Work.** Successful participatory preparation of a full sector strategy document has led to implementation of reform measures, harmonization of donor activities, and adoption of economic standards.
- (b) **Successful Privatization of Public Works.** Introducing competition between existing force account and small local enterprises provides a good transitional arrangement toward privatization without abolishing existing agencies. In fact, the coexistence of both force account and private contractors doing the same kind of road maintenance works gave both an incentive to optimize performance.
- (c) **Designing Robust Project Objectives.** The limited and straightforward nature of the project's objectives proved sufficiently robust to withstand extended political and economic turbulence, the birth of a democratically elected government, privatization, natural disaster, a substantial drop in domestic funds for road maintenance, and devaluation. The project did not need to be reappraised or restructured. Technical standards for works were modified and road sections were added or dropped, but the project objectives remained the same.
- (d) **Lightening Up Technical Assistance.** The full-time technical assistance arrangements in the project were very expensive and did not work well. A better arrangement has been made for the next project, involving short-term visits to achieve specific objectives linked to performance indicators. The sharing of this function by a combination of local and international consultants would offer the advantage of both cost reduction and local accessibility.

**PART II - STATISTICAL ANNEXES**

**Table 1: Summary of Assessments**

<b>A. <u>Achievement of objectives</u></b>	<b><u>Substantial</u></b>	<b><u>Partial</u></b>	<b><u>Negligible</u></b>	<b><u>Not applicable</u></b>
	(✓)	(✓)	(✓)	(✓)
Macro policies	---	---	---	X
Sector policies	X	---	---	---
Financial objectives	---	X	---	---
Institutional development	X	---	---	---
Physical objectives	X	---	---	---
Poverty reduction	---	---	---	X
Gender issues	---	---	---	X
Other social objectives	---	---	---	X
Environmental objectives	---	---	---	X
Public sector management	X	---	---	---
Other (specify) Privatization	X	---	---	---
<b>B. <u>Project sustainability</u></b>	<b><u>Likely</u></b>	<b><u>Unlikely</u></b>	<b><u>Uncertain</u></b>	
	(✓)	(✓)	(✓)	
	X	---	---	
<b>C. <u>Bank performance</u></b>	<b><u>Highly satisfactory</u></b>	<b><u>Satisfactory</u></b>	<b><u>Deficient</u></b>	
	(✓)	(✓)	(✓)	
Identification	---	X	---	
Preparation assistance	---	X	---	
Appraisal	X	---	---	
Supervision	X	---	---	
<b>D. <u>Borrower performance</u></b>	<b><u>Highly satisfactory</u></b>	<b><u>Satisfactory</u></b>	<b><u>Deficient</u></b>	
	(✓)	(✓)	(✓)	
Preparation	---	X	---	
Implementation	---	X	---	
Covenant compliance	---	X	---	
Operation (if applicable)	X	---	---	
<b>E. <u>Assessment of outcome</u></b>	<b><u>Highly satisfactory</u></b>	<b><u>Satisfactory</u></b>	<b><u>Unsatisfactory</u></b>	<b><u>Highly Unsatisfactory</u></b>
	(✓)	(✓)	(✓)	(✓)
	---	X	---	---

**Table 2 : Related Bank Loans/Credits**

<b>Loan/credit title</b>	<b>Purpose</b>	<b>Year of approval</b>	<b>Status</b>
<i>Preceding operations</i>			
1. Highway Maintenance and Engineering Project	Highway maintenance program	1970	Completed
2. Second Highway Project	Rehabilitation of Parakou-Malanville Road	1973	Completed
3. Third Highway Project	Rehabilitation and resurfacing of 575 km of bituminous and laterite roads; TA to the Ministries of Public Works and Transport; strengthening of on-going routine maintenance	1977	Completed
4. Fourth Highway Project	Rehabilitation of paved and gravel roads; improve the organization and administrative procedures of the Directorates of Roads and Bridges; train local staff; and road safety program	1981	Completed
5. First Feeder Road Project	To improve rural roads under the Sou-Borgou Cotton Project	1977	Completed
6. Second Feeder Road Project	Construction of 700 km of roads and its maintenance, plus maintenance of roads constructed under the previous project	1980	Completed
7. Third Feeder Road Project	3-year construction program of 840 km of feeder roads of low standard tracks; maintenance of about 2,000 km of feeder roads; technical assistance and training	1984	Completed
8. Cotonou Port Project	To provide additional capacity at Cotonou port to accommodate the increasing traffic; improve operational and financial performance of PAC and cargo handling company	1979	Completed
<i>Following operations</i>			
1. Transport Sector Project	To focus on infrastructure maintenance and rehabilitation, supporting rural production, encouraging private sector supply response, mobilizing domestic resources through user charges, and building institutional capacity.	1996L	In process (preparation)

**Table 3: Project Timetable**

<b>Steps in project cycle</b>	<b>Date Planned</b>	<b>Date Revised</b>	<b>Date actual/ latest estimate</b>
Identification (Executive Project Summary)			3-Dec-82
Preparation			19-Jul-85
Appraisal	May-85		17-May-85
Negotiations	Jan-86	Mar-85	20-Apr-87
Board presentation	Apr-86	Jul-86	26-May-87
Signing	Apr-86	Jul-86	24-Jun-87
Effectiveness	Oct-87	Jan-88	25-Mar-88
Project completion			
Loan closing	Mar-95		31-Mar-95

**Table 4: Credit Disbursements: Cumulative Estimated and Actual**  
(US\$ million)

	<b>FY88</b>	<b>FY89</b>	<b>FY90</b>	<b>FY91</b>	<b>FY92</b>	<b>FY93</b>	<b>FY94</b>	<b>FY95</b>
Appraisal Estimate	2.15	5.78	10.32	14.38	17.20	18.68	19.50	0.00
Actual	0.98	2.84	5.12	10.06	15.68	19.32	20.03	20.08
Actual as % of Estimate	45.6%	49.1%	49.6%	70.0%	91.2%	103.4%	102.7%	103.0%
Date of Final Disbursement: August 2, 1995								

Table 5 : Key Indicators for Project Implementation

I. Key implementation indicators in SAR/President's Report	Estimated	Actual
Rehabilitation of Roads (km)		
- paved	440	440
- unpaved	1,002	1529 <sup>a/</sup>
Rehabilitation of Port Infrastructure		
- dredging	1	1
- Eastern breakwater	1	1
- old commercial quays	1	1
- protection of South bank	1	1
Road Fund Ressources (CFA franc million)		
- from 1989 to 1993	2,977	994
- in 1994	2,977	1,581
- in 1995	2,977	2,050
Routine Maintenance Expenditure		
- from 1989 to 1993	2,205	550
- in 1994	2,205	680
- in 1995	2,205	1,427
PAC's working ratio	0.45	0.61 in 1991 0.44 in 1992 0.45 in 1993 0.52 in 1994
PAC long term indebtness	35 to 65	30-70 in 1991 61-39 in 1992 58-42 in 1993 61-39 in 1994
Decrease in staffing by 1992	20%	45%

<sup>a/</sup> reduction in technical standards

Table 6: Key Indicators for Project Operation

Not applicable

**Table 7 : Studies Included in Project**

<b>Study</b>	<b>Purpose as defined at appraisal/redefined</b>	<b>Status</b>	<b>Impact of study</b>
Dredging Study	Definition of technical and financial aspects of dredging	Completed	Development of a dredging plan and budget
Reform of Equipment pool	Define the strategy for the reform of the Equipment pool	Completed	Decision for reform taken by Conseil des Ministres in Feb-95
Strategy Study	Finalization of the document for the Transport Sector Strategy	Completed	Strategy discussed with donors in Oct-93

**Table 8 A: Project Costs**

Item	Appraisal Estimate (US\$ million) <sup>a/</sup>			Actual/Latest Estimate (US\$ million)		
	Local costs	Foreign costs	Total	Local costs	Foreign costs	Total <sup>d/</sup>
<b>A. Maritime Sector</b>						
1. Cotonou Port Rehabilitation	1.50	5.70	7.20			6.50
2. OBEMAP	0.10	1.60	1.70			2.30
<b>B. Highway Sector</b>	12.60	27.00	39.60			54.50
<b>C. Institution Building</b>	0.90	5.10	6.00			8.10
<b>Base Cost</b>	<b>15.10</b>	<b>39.40</b>	<b>54.50</b>			<b>71.40</b>
Physical Contingencies	2.10	4.80	6.90			
Price Contingencies	2.40	6.70	9.10			
<b>TOTAL PROJECT COST <sup>b/</sup></b>	<b>19.60</b>	<b>50.90</b>	<b>70.50</b>			

a/ From page 4 of MOP

b/ Project is exempt from taxes and duties

c/ PPF and Special Account 1.2 million US\$ included

**Table 8 B: Project Financing**

Source	Appraisal Estimate (US\$ million) <sup>a/</sup>			Actual/Latest Estimate (US\$ million)		
	Local costs	Foreign costs	Total	Local costs	Foreign costs	Total
IDA	2.70	16.80	19.50			20.40
Government	3.20	1.60	4.80			2.30
CCCE			2.40			2.30
FAC			1.40			
BOAD			6.20			5.30
ADF			8.60			9.00
IDB			4.60			4.20
EDF			23.00			27.90
<b>TOTAL</b>	<b>5.90</b>	<b>18.40</b>	<b>70.50</b>			<b>71.40</b>

**Table 9: Economic Costs and Benefits**

<b>Economic Rate of Return</b>	<b>SAR Estimate</b>	<b>Actual</b>
<b>Port</b>		
Repair of the Old Commercial Quays	23.20%	same
Protection of the South Bank of the Basin	33.00%	same
Eastern Breakwater	21.00%	same
Dredging	26.00%	>26 %
<b>Roads</b>		
Resurfacing of the Porto-Novo-Pobe Road	68.60%	>68.6 %
Rehabilitation of the Parakou-Malanville Road	105.85%	~ 49 %
Rehabilitation of the Come-Dogbo Road	30.00%	>30 %
Gravel Roads Regravelling and Rehabilitation	42.40%	220%

**Table 10: Status of Legal Covenants in the Credit Agreement**

Agreement	Text Ref.	Covenant Type	Present Status	Fulfillment Date		Description of Covenant	Comments
				Original	Revised		
CREDIT	2.02(b)	5	C			Borrower to open and maintain in CFA francs a Special Account and operate it in accordance with Schedule 5 of the Credit Agreement.	
	3.01(d)	3	C			The Borrower shall relend the proceeds of the Credit allocated to Categories (1) through (3) of the table set forth in para. 1 of Schedule 1 to this Agreement to PAC under a subsidiary loan agreement.	
	3.02(a)	5	C			Establish and Maintain a Project Account in a commercial bank to be used for meeting expenditures under Parts B and C (c), (d) and (e) of the Project not financed out of the proceeds of the Credit.	
	3.02(b)	4	NC			Deposit in the Project Account, before the beginning of each quarter of its fiscal year, the Borrower's contribution towards expenditures under (a) above.	Treasury does not deposit all collected funds and delays can reach 8 months.
	4.01(a)	1,5	C			Maintain records adequate to reflect in accordance with appropriate accounting practices the operations, resources and expenditures, in respect of Parts B & C (c), (d) and (e) of the Project	
	4.01(b) (i)	1,9	C			Have records and accounts including Special Accounts audited for each fiscal year, and furnish to IDA ASAP but not later than 6 months after the end of each year a certified copy of the audit report.	
	4.01(d)	1,5	C			The Borrower shall cause OBEMAP to maintain records and accounts adequate to reflect in accordance with sound accounting practices the operations and financial conditions of OBEMAP.	
	4.01(e)	1,9	C			The Borrower shall cause OBEMAP to have records, accounts and financial statements audited for each fiscal year, and furnish to IDA ASAP but not later than 6 months after the end of each year a certified copy of its financial statements.	
	4.02	3,5	C			Until the completion of the Project, the Borrower shall furnish to IDA for its approval its proposed annual investment plan, as well as its proposed annual expenditures for recurrent needs, for the entire transport sector.	1993-1997 program being discussed.
PAC	4.01 (c)	1,5,9	C			(i) - (iii) Maintain accounts and provide IDA with annual audit reports not later than 6 months after the end of each fiscal year.	
	4.02(a)	2	NC			For each Fiscal Year after December 31, 1987, achieve a working ratio not exceeding 0.45.	Working ratio 0.49. Work force was reduced by 50% in late 1991.
	4.03(a)	2	NC			PAC not to incur any long-term debt unless its debt to equity ratio does not exceed 35/65 after incidence of the planned additional borrowing.	52/48 in 1993 due to debt rescheduling with CAA.
	4.04	5	C			Furnish to IDA not later than 08/31 of each year the annual (a) maintenance program and related budget and (b) the proposed multi year investment plan and budget for the following year.	1993-1997 program discussed with the framework of the Transport Strategy.
SL # 1	2.1(a) (b) and (c)	10	C	06/30/88		Select before June 30, 1988 a consultant to develop within 6 months an analytical accounting system: a consultant to assist in Economic Studies and Port tariffing, and a consultant to assist during 15 man months in the reinforcement of internal auditing and the establishment of an MIS.	

Agreement	Text Ref.	Covenant Type	Present Status	Fulfillment Date		Description of Covenant	Comments
				Original	Revised		
SL # 1	3.1	2,5	C			Reduce receivables following agreed objectives.	
	3.2	5	C			Reschedule debt service arrears to the Caisse Autonome d'Amortissements and resume related payments	
	3.1	5	C			Revise tariffs annually and/or limit working expenses to generate funds to finance investments and debt service and maintain a positive cash position.	PAC reduced its staff by 50% in 1991.
	3.4	2,5	CP			Compensate receivables due by dissolved State Companies by the write off of an equal amount of PAC's debts to the State.	Agreement reached between PAC and CAA as of June 18, 1992. Still to be formally signed by MF
SL #2	5	4,5,11	CP			Annual Beninese contribution towards road maintenance to reach in constant CFAF billions: 2.70 in 1988; 2.97 in 1989 through 1993. Out of these the Road Fund was to collect 1.96 billions in 1989 through 1993.	Needs to be revised. In 1988, the Road Fund resources amounted to CFAF 1.6 billions; in 1989; CFAF 933 in 1990.
	16	4,11	C			Increase the share of the fuel tax earmarked for the Road Fund by CFAF 8/liter by the beginning of FY88.	
	16	5,11	CP			Further increase this share to finance 100% of routine maintenance and 10% of paved roads and 30% of gravel roads. Alternatively or complementarily levy an Axle tax. Adjust the annual tax per vehicle to have its output growing in line with the average traffic pace.	Needs to be revised. Being discussed
SL #3	Supp. Letter #3	5,12	CP			To finance the establishment and the operations of the "Direction des Etudes et de la Programmation (DEP).	Needs to be revised. DEP was dismantled. CPC was created.

**Covenant types:**

- 1 = Accounts/audits
- 2 = Financial performance/revenue generation from beneficiaries
- 3 = Flow and utilization of project funds.
- 4 = Counterpart funding.
- 5 = Management aspects of the project or executing agency.
- 6 = Environmental covenants.
- 7 = Involuntary resettlement.

- 8 = Indigenous people.
- 9 = Monitoring, review and reporting.

- 10 = Project Implementation not covered by categories 1-9
- 11 = Sectoral or cross-sectoral budgetary or other resource allocation
- 12 = Sectoral or cross-sectoral policy/regulatory/institutional action
- 13 = Other

**Present Status:**

- C = Covenant complied with
- CD = Complied with after delay.
- CP = Complied with partially.
- NC = Not complied with

**Table 11: Compliance with Operational Manual Statements**

<b>Statement number and title</b>	<b>Describe and comment on lack of compliance</b>
OD 10.60 Accounting, Financial Reporting and Auditing	
OD 12.20 Special Accounts	The audit reports were not submitted on time
OP 12.30 Statement of Expenditure	

**Table 12: Bank Resources: Staff Inputs**

<b>Stage of project cycle</b>	<b>Actual</b>	
	<b>Weeks</b>	<b>US\$ <sup>b/</sup></b>
Through Appraisal	39.3	
Appraisal – Board	109.2	
Board – effectiveness	16.1	
Supervision <sup>a/</sup>	104.9	
Completion		
<b>TOTAL</b>	<b>269.5</b>	

<sup>a/</sup> as of May 1995

<sup>b/</sup> Dollar budget available only since 1990 for planned and revised, but not for actual

Table 13: Bank Resources: Missions

Stage of Project Cycle	Month/ Year	Number of Persons	Days in Field	Specialized staff skills Represented a/	Performance rating		Types of problems
					Implemen- tation status	Develop- ment objectives	
Through Appraisal	Feb-83						
	Jan-84	3	10	HE,PE,FA			
	Apr-84	1	5	FA			
	Jun-84	3	4	HE,FA,PE,FA			
Appraisal through Board approval	May-85	4	19	HE,SFA,FA,PE,TS			
	Sep-85	5	6	HE,PE,FA,SRE			
	Aug-86	3		HE,PE,FA			
Board approval through effectiveness							
Supervision 1	Jul-87	2	4	SPE,HE	1	1	
Supervision 2	Oct-87	1	8	FA	1	1	
Supervision 3	Apr-88	2	4	SHE,EC	1	2	
Supervision 4	Jul-88	1	2	SHE	1	2	
Supervision 5	May-89	1	7	SHE	2	2	AF
Supervision 6	Jul-89	2	14	SHE,CONS	2	2	AF
Supervision 7	May-90	3	15	SHE,HE,CONS	2	2	AF,FP,CLC
Supervision 8	Aug-90	2	10	HE,CONS	2	2	AF,FP,CLC
Supervision 9	Jan-91	1	5	HE	2	2	AF,FP,CLC
Supervision 10	Aug-91	2	N.A.	HE,CONS	3	2	AF,FP,CLC
Supervision 11	Oct-91	2	10	HE,CONS	2	2	AF,FP,CLC,TAP
Supervision 12	Feb-92	2	6	HE,CONS	-	-	
Supervision 13	Jun-92	2	6	HE,CONS	2	1	
Supervision 14	Oct-92	1	8	HE	2	2	
Supervision 15	Mar-93	1	7	HE	2	2	
Supervision 16	Apr-93	1	22	HE	2	2	AF,FP
Supervision 17	Jun-93	1	6	HE	2	2	
Supervision 18	Oct-93	2	19	HE,HE	2	3	AF,PM,TR,TAP
Supervision 19	Dec-93	2	18	HE,FA	2	2	AF
Supervision 20	Apr-94	2	10	HE,FA	2	2	AF
Supervision 21	Jul-94	2	13	HE,FA	2	2	AF
Supervision 23	Apr-95	3	24	HE,FA,CONS	2	2	AF
Completion							

a/ Key to Specialization

SFA = Senior Financial Analyst  
 SHE = Senior Highway Engineer  
 SRE = Railway Engineer

CONS = Consultant (FA)  
 HE = Highway Engineer  
 PE = Port Engineer

FA = Financial Analyst  
 TS = Training Specialist

b/ Key to Status

1 = Problem Free

2 = Moderate problems

3 = Major Problems

c/ Key to Problems

AF = Availability of Funds  
 FP = Financial Performance  
 TAP = Tech. Asst. Progress

CLC = Compliance with Legal Covenants  
 PP = Procurement Progress  
 PM = Project Management

TR = Training Progress

## **APPENDIX: BORROWER'S CONTRIBUTION**

### **I. PORT COMPONENT**

#### **Introduction**

1. The Transport Infrastructure Rehabilitation and Maintenance Project contributed to a substantial improvement in port operations. The two main objectives, i.e., protecting past investments and increasing the productivity of port institutions, were fully attained. The training element was not fully executed.
2. Project execution experienced a major delay at startup, caused essentially by the somewhat complex nature of administrative procedures for credit ratification. This contributed to cost increases for certain components.
3. A more detailed assessment of project implementation is presented below. Project objectives, content and outcome are presented in the first part of this Implementation Completion Report, prepared by the World Bank.

#### **Project Design**

4. Government had observed the deterioration of port infrastructure through corrosion, erosion and lack of maintenance, which in the long term risked compromising infrastructure survival. In order to correct this situation, Government requested assistance from its external partners to finance the Port Infrastructure Rehabilitation and Maintenance Project, within the framework of a larger project covering transport infrastructure in general.
5. Project design is based directly on priorities defined by Government in the port subsector: consolidation and maintenance of infrastructure, and improvement of port management. The project's design was very much influenced by the experience of the previous port project: in the present project:
  - works were divided into lots, allowing for easier supervision;
  - project structure was simplified, in terms of the numbers of components and donors involved;
  - realistic objectives were adopted;

- mechanisms were put in place for more effective coordination among PAC, private enterprises, consultants, Government's financial intermediary (*Caisse Autonome d'Amortissement* or CAA), and donors;
- more practical and workable arrangements were made for supervision of works and technical assistance.

### **Project Preparation**

6. PAC played a leading role in project preparation: it conceived and prepared terms of reference for studies and participated in study preparation. PAC's point of view was clearly articulated and taken into account insofar as possible.

### **Project Execution**

7. Project effectiveness and early project execution experienced major delays, essentially for the reasons mentioned above. Despite these delays, the project was satisfactorily executed once it became effective.

8. The main factors which promoted works implementation are:

- involvement of local staff at all stages of project cycle;
- greater familiarity with World Bank procedures;
- the simplicity of project design;
- good overall working relationship with donors.

9. The financial objectives and the internal restructuring, especially staff reductions, were not carried out within the planned timetable because project design and programming of recommended measures did not take into account local conditions.

### **Borrower's Performance**

10. The Borrower, represented by PAC, adequately fulfilled its responsibilities.

### **Main Lessons Learned**

11. The main lessons learned are as follows:

- avoid complexity in project design;
- target technical assistance carefully and ensure regular supervision;
- stabilize existing administrative structures and the key managers within them;
- use simple conditionalities;
- ensure regular and sustained supervision by donors.

### **Project Impacts on the Port of Cotonou and the Economy**

12. The logic underlying the economic justification of the port investments is clear and self-evident, since their realization protected port structures which had suffered severe deterioration over time. These deteriorations threatened the survival of structures in the original port.

13. Since the project started two years late, certain structures whose status had been acceptable at the time of appraisal in 1987, had continued to deteriorate, leading to the need for additional works to take into account the worrisome condition of certain structures.

14. Overall the project was carried out in accordance with applicable international standards. Execution of works encountered no difficulties. At project startup, there were delays due to the effectiveness procedures for World Bank credits and to lengthy administrative procedures. Procedures required for signing of the credit agreement constituted a fundamental bottleneck to project effectiveness.

15. Benin's port administrators were able to get down to the business of implementing the project as soon as the Credit Agreement was signed. In managing this project, PAC's work was made much easier because of the experience gained during the implementation of the Cotonou Port Project. This experience meant that:

- staff experienced in relevant activities were made available to work on the project;
- good coordination was ensured with contractors and consultants, as well as with the CAA (Government's financial intermediary for Credit 1807-BEN);
- more rigorous and more appropriate supervision was carried out for project activities, and problems were identified in a timely way during the execution of works, thus avoiding prolonged work stoppages due to non-conformity of quantities or standards with contract requirements, so that physical works could be carried out at a normal pace.

16. Practical measures were also taken to supervise technical assistance staff, so that their involvement would effectively contribute to improvements in the management of the port.

17. In this context, it is deplorable that management objectives were not entirely attained in respect of the effective implementation of cost accounting for PAC. The supervision and management tools which the consultant was to have set up did not fully correspond to the needs which had been expressed. On the other hand, in certain areas the consultant was able to accurately analyze problems and propose relatively operational approaches to improve the situation.

### **World Bank Performance**

18. The World Bank was sufficiently cooperative with the Borrower both at project startup and during its implementation. With this donor, solutions were found to overcome any difficulty which arose. In particular, regular supervision of works by the Bank facilitated project coordination throughout the implementation period, and also allowed for constructive discussions which kept the project on track.

19. But in respect of execution of individual project elements, virtually none of the training program was carried out, with the exception of training in transport economics. This program should have received special attention, given the institutional restructuring which was going on. Remaining staff needed to upgrade their professional qualifications in order to improve PAC's output. Technical assistance staff did help somewhat to train staff on the job, but the expected transfer of knowledge fell short of what had been hoped for. Paradoxically, training designed to make up this deficit was never carried out. It is therefore necessary for Government's requests to the Bank to finance measures to support PAC's restructuring to be acted upon. Otherwise, the forthcoming sector project should take into account this preoccupation and make up for the previous project's failure by paying special attention to PAC's training needs.

### **Islamic Development Bank's Performance**

20. The Islamic Development Bank contributed a portion of project financing in accordance with the final financing plan worked out by the World Bank. The cooperation and availability of BID representatives contributed to the proper execution of IDB-financed work lots. The few difficulties encountered were essentially due to difficulties of international communications with the headquarters of this institution. These difficulties disrupted exchange of information and led to a lag in reaction time from this donor, in response to problems for which its advice was required. It should also be mentioned that the balance of the BID loan, 505,397 Islamic Dinars was cancelled, in spite of PAC's request to use this amount to finance the rehabilitation of port platforms.

## **II. HIGHWAY COMPONENT**

21. This report covers essentially the portion of the highway component financed by IDA. Overall, the main objectives of the project were attained, although some objectives were modified during project execution to take into account the realities of the situation on the ground.

22. Project execution experienced certain difficulties relating essentially to certain aspects of its original design and to the socio-political context prevailing at the time it was getting underway. In effect, from 1987 to 1990, the high turnover of staff in key decision-making positions within the ministry did not allow for continuous and regular

local supervision of project activities. At the same time, frequent staff changes within the technical assistance team was detrimental to project management during this period.

### **Project Design**

23. The design of the project was based on the lessons learned from the Fourth Highway Project. Three fundamental aspects of the Transport Infrastructure Rehabilitation and Maintenance Project reflect lessons learned during the Fourth Highway Project:

- There was special emphasis on the use of mechanized force account teams required to perform on the basis of unit costs established in advance, as is done for private contractors.
- A major effort was made to reinforce the capacity of internal supervision on the part of Government staff, by involving the equipment rental unit, SMTP, in project management, something which had not been done during the Fourth Highway Project. During the latter project, an autonomous unit, independent of SMTP and financed with outside funds, had been responsible for maintenance of equipment used for site works. It became clear that this structure was not sustainable and could not be continued after the Fourth Highway Project came to an end.
- Steps were taken to strengthen SMTP and improve its operational performance and its ability to manage its equipment pool.

24. Steps were also taken to centralize all road maintenance activities within DROA so as to eliminate internal contradictions and conflicts of authority which kept DROA from administering all aspects of road maintenance. Other innovations were introduced during the project, in particular the increased participation of the private sector in road maintenance works, which had previously been carried out exclusively under force account.

25. However, some administrative arrangements which were tried, such as the nomination of provincial heads of road maintenance units (*Services provinciaux des routes et ouvrages d'art*, or SPROA), did not fully take into account the operational complexities at the provincial level. The result was that road maintenance funds were used for other purposes until 1992, when the situation was finally rectified.

26. Also, the existence of more than one decision-making center (both DROA and the Road Fund) did not facilitate the supervision of funds committed and paid out under Credit 1807-BEN. Nor were there sufficiently transparent arrangements set up for a real and effective transfer of knowledge in financial management and accounting, including cost accounting, from technical assistance staff to local staff. Technical assistance costs absorbed too great a share of overall resources made available for the highway component of the project: CFA franc 1.5 billions out of a total of CFA franc 4.7 billions,

or nearly a third; this is a very high percentage. Lower technical assistance costs would have meant more resources could have been allocated to civil works.

### **Project Preparation**

27. The project was prepared under difficult socio-political conditions, characterized by tremendous instability within Government offices. Frequent transfers and turnover of staff at all levels meant that Government was not sufficiently involved in the preparation of the project, which was in the main carried out by external consultants.

### **Project Execution**

28. Problems relating to the instability mentioned above contributed heavily to delays in the effective startup of certain works, in particular those on unpaved (earth) roads. The consequences of these delays (extreme deterioration on most of the network) led to modifications of certain aspects of the project's initial objectives. However, following a stabilization of the situation beginning in 1990, works got underway and continued at a satisfactory pace. All the project's main objectives were attained. Other emergency needs which arose during project execution were acceptably met.

29. As for modifications made to some of the project's initial objectives, these include:

- The shift to spot rehabilitation (elimination of trouble spots) rather than systematic rehabilitation;
- Inclusion of maintenance for the Godomey-Cotonou-Porto-Novo road and of Red Star-New Bridge-Sobrera Crossroads, not originally included in the project;
- Addition of emergency repair works of Cotonou urban roads, following the severe flooding of 1991, also not originally included.
- Project execution suffered from two main problems:
- High turnover in the technical assistance team members from 1989 to 1992 due to poor performance, leading to high technical assistance costs, since some experts' terms were extended because they had not yet completed all aspects of the activities for which they were responsible.
- Ineffectiveness of cost accounting set up by the assigned expert, which did not allow for proper costing of civil works.

30. Furthermore, the participation of SMEs in road maintenance works ran into serious difficulties:

- delays in works execution (up to four times as long as times specified in contracts);
- lack of proper supplies;
- lack of adequate financial depth and relevant experience.

In conclusion, the experience of privatizing road works seems to have suffered from the absence of a sound market study which would have revealed the constraints and risks involved. The weaknesses in cost accounting mentioned above still prevent an adequate comparison of force account and privately contracted works.

31. Still, the positive results achieved were made possible because of the following factors:

- Greater stability in local staff beginning in 1990, when unpaved road works got underway;
- Constructive collaboration and coordination with IDA staff, characterized by good project supervision;
- Dedication of local staff.

### **Borrower Performance**

32. The performance of the borrower should be seen in two distinct periods: before and after 1990. Prior to 1990, as mentioned above, the overall socio-political context prevented adequate functioning of Government services. This contributed to a lack of real involvement by local staff in important aspects of project design and implementation. For example, technical assistance was in place for a year prior to actual startup of project works, and was being paid for their presence with no appropriate reaction on Government's part. From 1990 on, the Borrower was able to ensure better supervision of project activities. However, even during this period there was a lag in taking the decision to centralize road maintenance activities within DROA (1992), and counterpart funds were not made available in accordance with the Credit Agreement.

### **World Bank Performance**

33. The World Bank carried out regular and continuous supervision of the project. This enabled reshaping of project components as needed to adapt them to changing local conditions. The Bank demonstrated flexibility and understanding during the execution of civil works. Still, it should be mentioned that in certain cases, less rigidity on the part of the World Bank expert would have contributed to greater effectiveness in project management.

## **Lessons Learned**

34. The stability of staff in key positions constitutes an important factor in the internalization of the project by the Borrower and in its execution.
35. The goals of the project corresponded to actual needs, despite the fact that the project was designed prior to the definition of a sectoral policy framework. In the future, transport projects will fit into Government's transport sector policy which has existed since October 1993, and this will mean a closer relationship between project objectives and actual needs.
36. Better supervision of technical assistance, including clearer definition of tasks to be accomplished, should be sought in order to ensure good performance, especially regarding the transfer of knowledge to local staff.
37. SMEs could gain experience in road maintenance more gradually and more in line with their technical and financial capabilities.
38. Management of project resources (expenditure commitment and project accounting) should be centralized within a single entity (DROA) in order to avoid coordination and supervision problems.
39. It is desirable that the cost of foreign technical assistance in future projects be kept to a reasonable proportion of total project costs, in order to encourage greater participation by local expertise.







IMAGING

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